

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) A collision mitigation method used in a communication system, the method comprising the steps of:

in a first transmission pass, estimating a signal from a first source device that has been received over a first channel, wherein the step of estimating includes determining predetermined information sent from the first source device and wherein the first transmission pass is one of multiple transmission passes associated with a multiple transmission pass channel selection ~~process method~~ that uses the predetermined information for selecting a channel over which the first source device sends at least a portion of the predetermined information during each of the multiple transmission passes;

determining, based on the channel selection ~~process method~~, a set of channels that the signal from the first source device will be received over in at least one subsequent transmission pass of the multiple transmission passes; and

based on the steps of estimating and determining, removing the estimated signal received from the first source device from a composite signal received in the at least one subsequent transmission pass, the composite signal comprising signals transmitted from a plurality of source devices over a common second channel that is included in the determined set of channels.

2. (previously presented) The method of claim 1 wherein the step of estimating comprises estimating a received signal strength of the signal from the first source device.

3. (original) The method of claim 1 wherein the step of estimating utilizes error correction coding.
4. (currently amended) The method of claim 1 wherein the steps of estimating determining and removing claim 1 are repeatedly performed until all signals from the plurality of source devices are determined.
5. (cancelled)
6. (previously presented) The method of claim 1 wherein the first channel and the second channel are the same.
7. (previously presented) The method of claim 1 wherein the first channel and the second channel are different.
8. (previously presented) The method of claim 1 wherein the first channel is orthogonal to the second channel.
9. (previously presented) The method of claim 1 wherein the first channel is quasi-orthogonal to the second channel.

10. (currently amended) A collision mitigation method used in a multiple transmission pass communication system, the method comprising the steps of:

in a first transmission pass, estimating a signal from a first source device that has been received over a first channel, wherein the step of estimating includes determining predetermined information sent from the first source device and wherein the first transmission pass is one of multiple transmission passes associated with a multiple transmission pass channel selection ~~process method~~ that uses the predetermined information for selecting a channel over which the first source device sends at least a portion of the predetermined information during each of the multiple transmission passes;

determining, based on the channel selection ~~process method~~, a set of channels that the signal from the first source device will be received over in at least one prior or subsequent transmission pass of the multiple transmission passes; and

based on the steps of estimating and determining, removing the estimated signal received from the first source device from a composite signal received in the at least one prior or subsequent transmission pass, the composite signal comprising signals transmitted from a plurality of source devices over a common second channel that is included in the determined set of channels.

11. (cancelled)

12. (previously presented) The method of claim 10 further comprising the step of storing all signals received over their respective channels in each transmission pass.

13. (previously presented) The method of claim 10 wherein in each transmission pass, a plurality of source devices transmit their respective signals over their selected channels to a common destination device.

14. (original) The method of claim 10 wherein the step of estimating utilizes error correction coding.

15. (currently amended) The method of claim 10 wherein the steps of estimating, determining and removing claim 10 are repeatedly performed until all signals from the plurality of source devices are determined.

16. (currently amended) A collision mitigation method used in a communication system, the method comprising the steps of:

in a first transmission pass, estimating a signal from a first source device that has been received over a first channel, wherein the step of estimating includes determining predetermined information sent from the first source device and wherein the first transmission pass is one of multiple transmission passes associated with a multiple transmission pass channel selection process method that uses the predetermined information for selecting a channel over which the first source device sends at least a portion of the predetermined information during each of the multiple transmission passes;

determining, based on the channel selection process method, a set of channels that the signal from the first source device will be received over in at least one subsequent transmission pass of the multiple transmission passes; and

based on the step of determining, estimating a total number of source devices in the system based on at least the estimated signal from the first source device and a number of channels in the set of channels each having signals from at least two source devices.

17. (currently amended) The method of claim 16 wherein the steps of estimating the signal from the first source device, determining the set of channels and estimating the total number of source devices claim 16 are

repeatedly performed until a number of known source devices is equal to the estimated total number of source devices.

18. (currently amended) The method of claim 16 wherein the steps of estimating the signal from the first source device, determining the set of channels and estimating the total number of source devices ~~claim 16~~ are repeatedly performed until a predetermined confidence level is obtained.

19. (cancelled)

20. (cancelled)

21. (cancelled)

22. (cancelled)

23. (cancelled)